WE CLAIM:

1. A method for quantitatively analyzing a wafer for metal impurities, wherein the wafer has first and second surfaces, comprising:

heating the first surface of the wafer to diffuse the metal impurities to the second surface in an environment at least substantially free of contamination;

cooling the first surface of the wafer; and

quantitatively analyzing the second surface of the wafer for the metal impurities.

2. The method for quantitatively analyzing a wafer of claim 1, wherein the metal impurities include nickel.

3. The method for quantitatively analyzing a wafer of claim 1, wherein heating the first surface of the wafer includes heating the first surface of the wafer via a hotplate.

4. The method for quantitatively analyzing a wafer of claim 3, wherein heating the first surface of the wafer via a hotplate includes using a susceptor between the first surface of the wafer and the hotplate.

5. The method of quantitatively analyzing a wafer of claim 3, wherein cooling the first surface of the wafer includes switching off the hotplate and leaving the first surface of the wafer in thermal communication with the hotplate.

6. The method of quantitatively analyzing a wafer of claim 1, wherein heating the first surface of the wafer includes heating the wafer in a non-oxygen containing environment.

7. The method of quantitatively analyzing a wafer of claim 6, wherein heating the wafer in a non-oxygen containing environment includes heating the wafer in a nitrogen gas environment.

8. The method of quantitatively analyzing a wafer of claim 1, wherein cooling the first surface of the wafer includes cooling the wafer via a cooling plate.

9. The method of quantitatively analyzing a wafer of claim 1, wherein cooling the first surface of the wafer includes cooling the wafer via a fluid solution.

10. The method of quantitatively analyzing a wafer of claim 9, wherein the fluid solution includes ethylene glycol.

11. The method of quantitatively analyzing a wafer of claim 1, wherein quantitatively analyzing the second surface of the wafer includes measuring the metal impurities on the second surface.

12. The method of quantitatively analyzing a wafer of claim 1, wherein quantitatively analyzing the second surface of the wafer includes extracting the metal impurities from the second surface.

13. The method of quantitatively analyzing a wafer of claim 12, wherein extracting the metal impurities includes decomposing the second surface of the wafer and scanning an extraction solution droplet across the second surface.

14. The method of quantitatively analyzing a wafer of claim 12, wherein extracting the metal impurities includes adding an extraction solution droplet on the second surface and spreading the droplet across the second surface.

15. The method of quantitatively analyzing a wafer of claim 1, further comprising removing a native oxide layer from at least one of the first and second surfaces of the wafer.

16. The method of quantitatively analyzing a wafer of claim 15, wherein removing a native oxide layer includes removing the native oxide layer by vapor phase decomposition.

17. The method of quantitatively analyzing a wafer of claim 15, wherein removing a native oxide layer from at least one of the first surface and second surface of the wafer occurs before heating the first surface of the wafer.

18. A method for quantitatively analyzing a wafer for metal impurities, wherein the wafer has first and second surfaces, comprising:

removing a native oxide layer from at least one of the first and second surfaces of the wafer;

heating the first surface of the wafer via a hotplate to diffuse the metal impurities to the second surface in an environment at least substantially free of contamination, wherein a susceptor is used between the first surface of the wafer and the hotplate;

cooling the first surface of the wafer; and

quantitatively analyzing the second surface of the wafer for metal impurities.

19. The method of quantitatively analyzing a wafer of claim 18, wherein the metal impurities include nickel.

20. The method of quantitatively analyzing a wafer of claim 18, wherein removing a native oxide layer includes removing a native oxide layer by vapor phase decomposition.

21. The method of quantitatively analyzing a wafer of claim 18, wherein cooling the first surface of the wafer includes switching off the hotplate and leaving the first surface of the wafer in thermal communication with the hotplate.

22. The method of quantitatively analyzing a wafer of claim 18, wherein quantitatively analyzing the second surface of the wafer includes performing at least one of vapor phase decomposition inductively coupled plasma-mass spectrometry and vapor phase decomposition total x-ray fluorescence.

23. A method for quantitatively analyzing a wafer for nickel, wherein the wafer has first and second surfaces, comprising:

heating the first surface of the wafer to diffuse the nickel to the second surface in an environment at least substantially free of contamination;

cooling the first surface of the wafer; and

quantitatively analyzing the second surface of the wafer for the nickel.

24. The method for quantitatively analyzing a wafer of claim 23, wherein heating the first surface of the wafer includes heating the first surface of the wafer via a hotplate.

25. The method for quantitatively analyzing a wafer of claim 24, wherein heating the first surface of the wafer via a hotplate includes placing a susceptor between the first surface of the wafer and the hotplate.

26. The method of quantitatively analyzing a wafer of claim 24, wherein cooling the first surface of the wafer includes switching off the hotplate and leaving the first surface of the wafer in thermal communication with the hotplate.

27. The method of quantitatively analyzing a wafer of claim 23, wherein heating the first surface of the wafer includes heating the wafer in a non-oxygen containing environment.

28. The method of quantitatively analyzing a wafer of claim 23, wherein cooling the first surface of the wafer includes cooling the wafer via a cooling plate.

29. The method of quantitatively analyzing a wafer of claim 23, wherein cooling the first surface of the wafer includes cooling the wafer via a fluid solution.

30. The method of quantitatively analyzing a wafer of claim 23, wherein quantitatively analyzing the second surface of the wafer includes measuring the nickel on the second surface.

31. The method of quantitatively analyzing a wafer of claim 23, wherein quantitatively analyzing the second surface of the wafer includes extracting the nickel from the second surface.

32. The method of quantitatively analyzing a wafer of claim 23, further comprising removing a native oxide layer from at least one of the first and second surfaces of the wafer.

33. The method of quantitatively analyzing a wafer of claim 32, wherein removing a native oxide layer includes removing the native oxide layer by vapor phase decomposition.

34. The method of quantitatively analyzing a wafer of claim 32, wherein removing a native oxide layer from at least one of the first surface and second surface of the wafer occurs before heating the first surface of the wafer.